



**EMPLOYEES**

**ENERGY**

**PURCHASING**

**WATER**

**WASTE**

**RESILIENCY  
AND  
PREPAREDNESS**

# MUNICIPAL SUSTAINABILITY PLAN

**City of Flagstaff**  
**Fiscal Years 2013 and 2014**

# FLAGSTAFF MUNICIPAL SUSTAINABILITY PLAN



In the summer of 2011, we introduced the City of Flagstaff Municipal Sustainability Plan. In the Plan we set goals for improving our organization by increasing our effectiveness, reducing consumption, and refining outdated processes. I'm proud of our accomplishments over the last year. We introduced new policies that phase out inefficient fleet and reduce energy and paper consumption. We incorporated new technologies to update operating software that will improve our customer service and data management. We transitioned energy management to a centralized tracking system that allows us to monitor and address energy consumption more strategically. Now we can promptly respond to increases and target areas in need of improvement.

With one year of work behind us, we have refined our commitment, reviewed opportunities, and updated our goals. The revised Plan will set our path for the next two fiscal years. During which time we will conduct additional energy audits of our facilities and water operations, reduce our fleet, increase renewable energy generation, reduce natural resource consumption, and decrease recycling contamination. Our strategy is simple – to “Be Resourceful.” To Be Resourceful we must work skillfully to overcome a challenge. We must assess the challenge, evaluate available resources, and find creative solutions to achieve the desired outcome. You will see the Be Resourceful slogan on all our Sustainability Plan initiatives. We want to remind employees to ask themselves “Am I being resourceful?” and at the same time challenge them to help us reach the goals outlined in the Plan.

The Municipal Plan is a representation of the City's commitment to good governance. It sets our course towards efficiency, and resourceful and continuous improvement. Our success will allow us to deal more cautiously with risk and uncertainty by being more efficient with limited natural and fiscal resources.

Sincerely,



Kevin Burke

## Photos from the cover:

- The 566 kilowatt solar array at the Wildcat Hill Wastewater Treatment Facility.
- The waterfall at Picture Canyon.
- A wind turbine at NACET in Flagstaff during sunset.
- Employees of the Wastewater Treatment Facility during Bike to Work Week.

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# EMPLOYEES

## ❖ Foster a safe and healthy work environment.

### ♦ **Increase and maintain employee satisfaction.**



#### Short Term

- Utilize 2010 employee opinion survey results to identify targeted areas for improved employee satisfaction.
- Work with the Employee Advisory Committee to increase employee satisfaction.
- Conduct biennial employee opinion survey of all staff.

#### Mid Term

- Conduct annual employee opinion surveys.
- Increase employee engagement programs.

#### Long Term

- Determine long term targets.

### ♦ **Increase employee health and safety.**

#### Short Term

- Monitor, track, and report employee related health and safety hazards.
- Develop a city-wide employee health and safety hazard reporting system.
- Provide ongoing support for employee safety trainings including Asbestos Awareness and Stormwater Prevention.
- Integrate Division-specific employee safety protocols and/or committees for 3 Divisions.

#### Mid Term

- Report employee safety results annually.
- Integrate Division-specific employee safety protocols and/or committees for all appropriate municipal divisions.

#### Long Term

- Determine long term targets.

♦ **Increase employee options and participation in wellness efforts.**

<b>Short Term</b>	<ul style="list-style-type: none"> <li>• Develop employee wellness efforts with teamWELL.</li> <li>• Research and recommend healthy eating options in vending machines at municipal facilities.</li> </ul>
<b>Mid Term</b>	<ul style="list-style-type: none"> <li>• Increase employee participation in teamWELL activities.</li> </ul>
<b>Long Term</b>	<ul style="list-style-type: none"> <li>• Determine long term targets.</li> </ul>

♦ **Increase continuous learning and employee recognition.**

<b>Short Term</b>	<ul style="list-style-type: none"> <li>• Initiate Be Resourceful employee education campaign.</li> <li>• Develop and implement Be Resourceful employee recognition program.</li> </ul>
<b>Mid Term</b>	<ul style="list-style-type: none"> <li>• Initiate employee job shadowing program.</li> </ul>
<b>Long Term</b>	<ul style="list-style-type: none"> <li>• Determine long term targets.</li> </ul>

♦ **Enhance employee awareness of the Municipal Sustainability Plan and sustainability performance management.**

<b>Short Term</b>	<ul style="list-style-type: none"> <li>• Develop employee trainings in coordination with Human Resources.</li> <li>• Conduct new employee sustainability orientation to introduce Municipal Sustainability Plan.</li> </ul>
<b>Mid Term</b>	<ul style="list-style-type: none"> <li>• Involve leadership team in development of the sustainability performance management system.</li> <li>• Adopt a sustainability performance management system.</li> <li>• Ensure employees actively participate in sustainability performance management system.</li> </ul>
<b>Long Term</b>	<ul style="list-style-type: none"> <li>• Integrate sustainability performance management system into all employee job responsibilities.</li> </ul>

# ENERGY



## ❖ Increase energy efficiency and energy performance of municipal operations.

### ◆ **Effectively manage and reduce municipal energy use.**

<b>Short Term</b>	<ul style="list-style-type: none"><li>• Track energy use for all municipal operations in MyEnergyPro.</li><li>• Train employees to utilize MyEnergyPro for energy management needs.</li><li>• Complete account audit and implement recommendations for natural gas meters.</li><li>• Incorporate efficiency projects into primary energy users work programs.</li><li>• Conduct semi-annual rate review of all energy accounts.</li><li>• Reduce municipal energy use 5% from FY 2009 levels to 58,036 MWh.</li></ul>
<b>Mid Term</b>	<ul style="list-style-type: none"><li>• Reduce municipal energy use 10% from FY 2009 levels to 54,981 MWh.</li></ul>
<b>Long Term</b>	<ul style="list-style-type: none"><li>• Reduce municipal energy use 15% from FY 2009 levels to 51,927 MWh.</li></ul>

### ◆ **Ensure optimal energy performance of all occupied municipal facilities.**

<b>Short Term</b>	<ul style="list-style-type: none"><li>• Perform energy audits of all occupied municipal facilities.</li><li>• Conduct initial insulation repairs to all occupied municipal facilities.</li><li>• Conduct building envelope and ducting air-seal mitigation.</li><li>• Implement energy management settings on all municipal computers.</li><li>• Consolidate the number of common refrigerators in City Hall.</li><li>• Eliminate use of all individual printers, refrigerators, space heaters, microwaves, and other personal appliances.</li></ul>
<b>Mid Term</b>	<ul style="list-style-type: none"><li>• Install solar glazing and energy efficient windows in all occupied municipal facilities.</li><li>• Repair existing HVAC systems of all occupied municipal facilities not targeted for demolition or sale.</li></ul>
<b>Long Term</b>	<ul style="list-style-type: none"><li>• Determine long term targets.</li></ul>



♦ **Increase accountability of employee municipal energy use.**

<b>Short Term</b>	<ul style="list-style-type: none"><li>• Conduct sustainability inventory of City Hall, office spaces, and common areas.</li><li>• Initiate Be Resourceful employee education campaign targeting employee behaviors.</li><li>• Conduct voluntary sustainability office assessments.</li></ul>
<b>Mid Term</b>	<ul style="list-style-type: none"><li>• Evaluate employee behavior benchmarks and energy savings.</li></ul>
<b>Long Term</b>	<ul style="list-style-type: none"><li>• Determine long term targets.</li></ul>

♦ **Reduce greenhouse gas emissions generated by municipal operations.**

<b>Short Term</b>	<ul style="list-style-type: none"><li>• Monitor, evaluate, and report annual City greenhouse gas emissions generated.</li><li>• Stabilize greenhouse gas emissions to FY 2009 levels: 53,262 metric tons of CO<sub>2</sub>E.</li></ul>
<b>Mid Term</b>	<ul style="list-style-type: none"><li>• Reduce greenhouse gas emissions 10% from FY 2009 levels to 47,936 metric tons of CO<sub>2</sub>E.</li></ul>
<b>Long Term</b>	<ul style="list-style-type: none"><li>• Reduce greenhouse gas emissions 15% from FY 2009 levels to 45,274 metric tons of CO<sub>2</sub>E.</li></ul>

❖ Increase renewable energy generation.

♦ **Increase renewable energy generation and consumption.**

<b>Short Term</b>	<ul style="list-style-type: none"><li>• Increase renewable energy production to 15% of annual municipal energy consumption.</li><li>• Complete phase II of solar power installations at City Hall and the Aquaplex.</li></ul>
<b>Mid Term</b>	<ul style="list-style-type: none"><li>• Increase renewable energy production to 35% of annual municipal energy consumption.</li><li>• Complete phase III of solar power installations.</li><li>• Diversify renewable energy portfolio to include biogasification and methane collection.</li></ul>
<b>Long Term</b>	<ul style="list-style-type: none"><li>• Increase renewable energy production to 50% of annual municipal energy consumption.</li></ul>

## ❖ Increase efficiency and overall performance of municipal fleet.

### ♦ **Reduce annual municipal fuel consumption.**

<b>Short Term</b>	<ul style="list-style-type: none"><li>• Improve fuel consumption tracking mechanisms.</li><li>• Develop Division and equipment specific fuel reporting.</li><li>• Reduce annual municipal fuel consumption 5% from FY 2010 levels to 427,589 gallons.</li><li>• Revise vehicle take home policy.</li><li>• Revise out of town travel fleet policy.</li></ul>
<b>Mid Term</b>	<ul style="list-style-type: none"><li>• Reduce annual fuel consumption in fleet 10% from FY 2010 levels to 405,085 gallons.</li><li>• Develop a bicycle lending program.</li></ul>
<b>Long Term</b>	<ul style="list-style-type: none"><li>• Reduce annual fuel consumption in fleet 15% from FY 2010 levels to 382,580 gallons.</li></ul>

### ♦ **Increase alternative fuel utilized in municipal fleet.**

<b>Short Term</b>	<ul style="list-style-type: none"><li>• Research Compressed Natural Gas conversion.</li><li>• Research 30% biodiesel blend for year round use.</li></ul>
<b>Mid Term</b>	<ul style="list-style-type: none"><li>• Incorporate alternative fuel technologies.</li><li>• Transition the fueling for municipal fleet to 30% biodiesel blend.</li><li>• Research 40% biodiesel blend for year round use.</li></ul>
<b>Long Term</b>	<ul style="list-style-type: none"><li>• Transition the fueling for municipal fleet to 40% biodiesel blend for year round use.</li></ul>

### ♦ **Decrease annual vehicle miles traveled.**

<b>Short Term</b>	<ul style="list-style-type: none"><li>• Conduct fleet scheduling and route efficiency audit and implement recommendations.</li><li>• Increase use of pool vehicle system.</li><li>• Increase participation in employee bus pass program.</li></ul>
<b>Mid Term</b>	<ul style="list-style-type: none"><li>• Decrease annual vehicle miles traveled by 10% from FY 2010 levels.</li><li>• Implement a municipal bicycle lending program.</li></ul>
<b>Long Term</b>	<ul style="list-style-type: none"><li>• Decrease annual vehicle miles traveled by 20% from FY 2010 levels.</li></ul>



♦ **Increase high efficiency vehicles (HEV) or alternative fuel light duty fleet purchases.**

<b>Short Term</b>	<ul style="list-style-type: none"> <li>• Research HEV and alternative fuel options for light duty fleet.</li> <li>• Ensure 50% of all light duty vehicles purchases are HEV or alternative fuel as appropriate.</li> </ul>
<b>Mid Term</b>	<ul style="list-style-type: none"> <li>• Ensure 75% of all light duty vehicles purchases are HEV or alternative fuel as appropriate.</li> </ul>
<b>Long Term</b>	<ul style="list-style-type: none"> <li>• Ensure 100% of all light duty vehicles purchased are HEV or alternative fuel as appropriate.</li> </ul>

♦ **Decrease percent of inefficient and underutilized vehicles.**

<b>Short Term</b>	<ul style="list-style-type: none"> <li>• Develop fleet replacement budget policy.</li> <li>• Phase out 20% of inefficient vehicles from fleet.</li> <li>• Remove 20% of underutilized vehicles from fleet.</li> </ul>
<b>Mid Term</b>	<ul style="list-style-type: none"> <li>• Phase out 50% of inefficient vehicles from fleet.</li> <li>• Remove 50% of underutilized vehicles from fleet.</li> </ul>
<b>Long Term</b>	<ul style="list-style-type: none"> <li>• Phase out 100% of inefficient and underutilized vehicles from fleet.</li> </ul>

♦ **Increase accountability of employee use of municipal fleet.**

<b>Short Term</b>	<ul style="list-style-type: none"> <li>• Develop informational fleet manual for staff.</li> <li>• Implement smart driving trainings in coordination with Fleet, Human Resources, and Risk Management.</li> <li>• Initiate Be Resourceful employee education campaign targeting driving behavior.</li> </ul>
<b>Mid Term</b>	<ul style="list-style-type: none"> <li>• Research and pilot driver performance change management program.</li> <li>• Evaluate smart driving trainings.</li> </ul>
<b>Long Term</b>	<ul style="list-style-type: none"> <li>• Evaluate driver performance change management pilot.</li> </ul>

# PURCHASING



## ❖ Adhere to sustainable purchasing practices.

### ◆ **Incorporate sustainability principles into purchasing process.**

<b>Short Term</b>	<ul style="list-style-type: none"><li>• Incorporate sustainable procurement standards in the Procurement Manual.</li><li>• Require all City RFP/RSOQ/RFIs to include sustainable procurement principles.</li><li>• Require 50% post-consumer waste recycled content for paper.</li><li>• Develop sustainable purchasing guide for Purchasing staff.</li><li>• Create employee purchasing catalogue to increase cost effectiveness of products through buying power.</li></ul>
<b>Mid Term</b>	<ul style="list-style-type: none"><li>• Develop sustainable purchasing manual for all employees.</li></ul>
<b>Long Term</b>	<ul style="list-style-type: none"><li>• Update sustainable purchasing manual as needed.</li></ul>

### ◆ **Work with suppliers to develop purchasing catalog to increase competitive purchasing rate.**

<b>Short Term</b>	<ul style="list-style-type: none"><li>• Provide suppliers with sustainable purchasing policy information.</li><li>• Conduct supplier educational workshops.</li><li>• Require digital submission for procurement solicitations.</li></ul>
<b>Mid Term</b>	<ul style="list-style-type: none"><li>• Determine mid term targets.</li></ul>
<b>Long Term</b>	<ul style="list-style-type: none"><li>• Determine long term targets.</li></ul>

♦ **Increase accountability of employee use of public resources.**

<b>Short Term</b>	<ul style="list-style-type: none"> <li>• Initiate Be Resourceful employee education campaign targeting sustainable purchasing.</li> <li>• Work with other Divisions to collect data for performance tracking and evaluation.</li> </ul>
<b>Mid Term</b>	<ul style="list-style-type: none"> <li>• Conduct employee sustainable purchasing trainings.</li> </ul>
<b>Long Term</b>	<ul style="list-style-type: none"> <li>• Determine long term targets.</li> </ul>

## WATER

❖ Reduce municipal water consumption.

♦ **Effectively manage and reduce municipal water consumption.**

<b>Short Term</b>	<ul style="list-style-type: none"> <li>• Improve water consumption tracking mechanisms.</li> <li>• Track water use for municipal operations in MyEnergyPro.</li> <li>• Prioritize major water users for immediate water conservation measures.</li> <li>• Train employees to utilize MyEnergyPro for municipal water management needs.</li> <li>• Incorporate efficiency projects into primary water users' work programs.</li> <li>• Initiate Be Resourceful employee education campaign targeting water consumption.</li> <li>• Reduce municipal water consumption 5% from FY 2012 levels to 65,140,412 gallons.</li> </ul>
<b>Mid Term</b>	<ul style="list-style-type: none"> <li>• Reduce municipal water consumption 10% from FY 2012 levels to 61,711,970 gallons.</li> </ul>
<b>Long Term</b>	<ul style="list-style-type: none"> <li>• Reduce municipal water consumption 15% from FY 2012 levels to 58,283,527 gallons.</li> </ul>



# WASTE



## ❖ Increase paper use efficiency in municipal operations.

### ♦ **Effectively manage and reduce municipal paper consumption.**

Short Term	<ul style="list-style-type: none"> <li>Track municipal paper consumption.</li> <li>Reduce paper purchased 25% based on FY 2010 rates to 939,112 pieces of paper.</li> </ul>
Mid Term	<ul style="list-style-type: none"> <li>Reduce paper purchased 40% based on FY 2010 rates to 751,290 pieces of paper.</li> </ul>
Long Term	<ul style="list-style-type: none"> <li>Reduce paper purchased 50% based on FY 2010 rates to 626,075 pieces of paper.</li> </ul>

### ♦ **Ensure all printers and copiers have two-sided print capability.**

Short Term	<ul style="list-style-type: none"> <li>Audit printers with two-sided print capability.</li> <li>Ensure 50% of all printers and copiers have two-sided print capability.</li> </ul>
Mid Term	<ul style="list-style-type: none"> <li>Ensure 75% of all printers and copiers have two-sided print capability.</li> </ul>
Long Term	<ul style="list-style-type: none"> <li>Ensure 100% of all printers and copiers have two-sided print capability.</li> </ul>

### ♦ **Increase accountability of employee paper use.**

Short Term	<ul style="list-style-type: none"> <li>Initiate Be Resourceful employee education campaign targeting paper use.</li> </ul>
Mid Term	<ul style="list-style-type: none"> <li>Evaluate employee behavior benchmarks and paper use reductions.</li> </ul>
Long Term	<ul style="list-style-type: none"> <li>Determine long term targets.</li> </ul>

❖ Increase recycling rates and decrease contamination at municipal facilities, parks, and events.

♦ **Increase recycling awareness and participation among City employees.**

Short Term	<ul style="list-style-type: none"><li>• Recycling behavior awareness and education.</li><li>• Initiate Be Resourceful employee education campaign.</li><li>• Develop recycling awareness targeting janitorial staff and users of municipal facilities.</li></ul>
Mid Term	<ul style="list-style-type: none"><li>• Determine mid term targets.</li></ul>
Long Term	<ul style="list-style-type: none"><li>• Determine long term targets.</li></ul>

♦ **Increase recovery rate of recyclable materials and reduce overall contamination rate.**

Short Term	<ul style="list-style-type: none"><li>• Achieve 80% recovery rate of recyclable materials and 20% contamination rate.</li><li>• Re-bin all facilities with color coordinated recycling and trash receptacles.</li><li>• Incorporate recycling goals into janitorial contracts.</li></ul>
Mid Term	<ul style="list-style-type: none"><li>• Achieve 90% recovery rate of recyclable materials and 5% contamination rate.</li></ul>
Long Term	<ul style="list-style-type: none"><li>• Achieve 100% recovery rate of recyclable materials and 0% contamination rate.</li></ul>



# RESILIENCY AND PREPAREDNESS



## ❖ Increase municipal resiliency and preparedness to weather and climate.

### ◆ **Increase resiliency and preparedness of municipal operations.**

Short Term	<ul style="list-style-type: none"><li>• Develop implementation strategy and matrix.</li><li>• Develop performance benchmarks and communication mechanism to ensure municipal operations integrate resiliency and preparedness goals.</li><li>• Prioritize the integration of resiliency and preparedness principles into municipal projects in areas that are most vulnerable and at risk: Emergency Services, Water, Forest Health, and Energy.</li><li>• Incorporate resiliency and preparedness goals into City budget development and performance measures.</li></ul>
Mid Term	<ul style="list-style-type: none"><li>• Conduct a follow up vulnerability and risk assessment of municipal operations to weather.</li><li>• Adopt a sustainability performance management system that aligns with resiliency and preparedness goals.</li></ul>
Long Term	<ul style="list-style-type: none"><li>• Determine long term targets.</li></ul>

### ◆ **Enhance the level of organizational and individual preparedness through education and training.**

Short Term	<ul style="list-style-type: none"><li>• Prioritize employees adversely impacted by weather and climate.</li><li>• Coordinate with Human Resources, Risk Management, supervisors, and Coconino County Office of Emergency Management to conduct employee weather and emergency preparedness trainings.</li><li>• Integrate resiliency and preparedness goals into updated Division strategic plans.</li></ul>
Mid Term	<ul style="list-style-type: none"><li>• Evaluate employee trainings.</li><li>• Incorporate employee weather and emergency preparedness training into new employee orientation.</li></ul>
Long Term	<ul style="list-style-type: none"><li>• Determine long term targets.</li></ul>



◆ **Incorporate resiliency and preparedness principles into City planning.**

<b>Short Term</b>	<ul style="list-style-type: none"><li>• Incorporate resiliency and preparedness goals into Regional Plan updates and water policies.</li><li>• Develop comprehensive criteria that incorporate resiliency into all municipal planning efforts.</li><li>• Coordinate with Planning Cabinet to incorporate resiliency and preparedness goals into planning projects.</li></ul>
<b>Mid Term</b>	<ul style="list-style-type: none"><li>• Update Emergency Operations Plan and Multi-Jurisdictional Hazards Mitigation Plan to incorporate future climate projections and resiliency and preparedness goals.</li><li>• Adopt Community Energy Assurance Plan in coordination with County and utility providers.</li></ul>
<b>Long Term</b>	<ul style="list-style-type: none"><li>• Determine long term targets.</li></ul>







[www.flagstaff.az.gov/plan](http://www.flagstaff.az.gov/plan)

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